Jon Home

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J. Postel
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The Remote User Telnet Service

This RFC is the specification of an application protocol. Any host that implements this application level service must follow this protocol.

This RFC was suggested by Mike Mulligan some months ago when he was at BBN.

In the ARPANET Host-to-Host Network Control Protocol (NCP) and in the Internet Transmission Control Protocol (TCP) well known sockets or ports are used to identify services. The general notion is that there are a few types of services that are distinct and useful enough to use the NCP or TCP demultiplexing mechanism directly.

The most common of these is the Server Telnet which generally speaking defines the network terminal access procedure for a system executive. That is, making a connection to the server Telnet port actually puts the caller in contact with the system executive, for example, the TOPS20 EXEC or the Unix Shell.

On some small hosts there may be very limited functionality and no executive. In such cases it may be useful to designate specific well known ports for specific applications.

This memo specifies that the specific service of User Telnet may be accessed (on hosts that choose to provide it) by opening a connection to port 107 (153 octal). The Telnet Protocol is to be used on the connection from the originating user to the server.

EXAMPLE: REMOTE TELNET SERVICE ON THE BBN TC68K

The TC68K is a Terminal Concentrator based on the Motorola MC68000 microprocessor. It is used at Bolt Beranek & Newman to provide access by terminals to the FiberNet, a local area network.

The custom hardware provides one network connection, sixteen RS232 terminal connections, and a programmable timer.

The software is based on the Micro-Operating System (MOS) using the IP, ICMP, TCP, and Telnet protocols. A user TC-Telnet application provides an interface to allow the user to use the network to connect to a host,

providing a network virtual terminal. A server Telnet also exists on the TC68K to serve as a front end for devices that have no awareness of the net. This is used for remote printer/plotters and computers with no network software.

The TC68Ks at BBN are distributed about several buildings. To provide an operational tool to test remote TC68Ks, the TC68K software was configured to put a user Telnet back to back with a server Telnet. An operator can open a connection to a remote TC68K and appear to be a terminal local to that unit. This verifies that the network path between the two units is operational and provides the operator with access to statistics that are kept as part of the standard user TC-Telnet application.

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Operator's          Local                          Remote          Remote
Terminal   <=TTY=>  user       <=FiberNet=>       server  <=PTY=>  user
                    TC-Telnet                      Telnet          TC-Telnet
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This solution was attractive as the only extra piece of software necessary for this was the "Pseudo Teletype" (PTY) device driver for MOS. This "device" appears as a terminal to its application, but what it is really doing is providing a character stream between two processes.